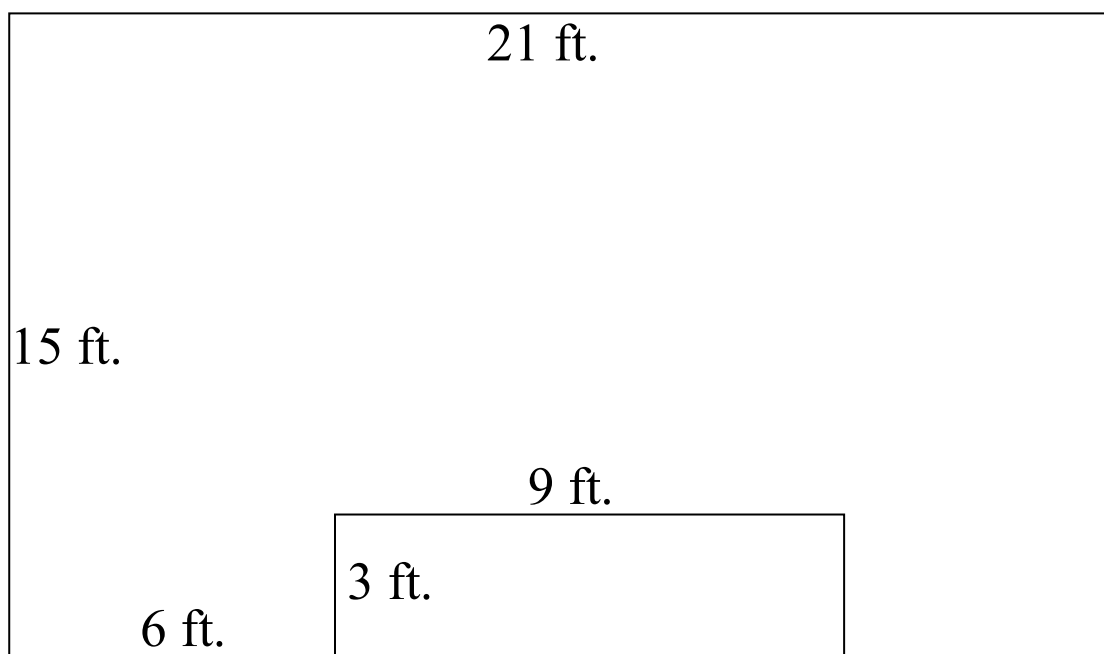


## The Rossi's New Kitchen

The Rossi family wants to install new tiles on the floor of their kitchen. The tiles they plan to use are 3 in. by 3 in. squares. The floor space to be covered is shown in the diagram below, with the measurements given in feet. How many square tiles will the Rossi family need to cover their kitchen floor?

[Source: *Mathematics Teaching in the Middle School*, volume 8, number 7, March 2003]

Drawing not to scale



The total area to be tiled is  $288 \text{ ft}^2$  ( $315 - 27$ ). Each  $3 \times 3$  floor tile will contain  $9 \text{ in}^2$ , and each square foot is  $144 \text{ in}^2$ . Therefore, it will take 16 tiles for each square foot, so they will need 4,608 tiles for their kitchen.